

## **COMPACT MICROCOLUMN FOR AUTOMATED ASSEMBLY**

### **ABSTRACT**

**[0063]** A microcolumn including an assembly substrate and a plurality of beam modification components. The assembly substrate includes a plurality of sockets, and the beam modification components each include a connector coupled to a corresponding one of the sockets. Assembly of the beam modification components to the assembly substrate may employ automation and/or automated calibration, including automated motion of robotic stages in a substantially automated manner.